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ABSTRACT

A study of business and labor was conducted to define the performance skills expected of those entering the workplace in the 1990s and beyond. Survey respondents were 1,120 business people and 26 labor representatives in Illinois of whom 90 participated in follow-up roundtable discussions. Respondents identified and rank ordered nine basic skills: reading, writing, and math; communication; employability; critical thinking; group and teamwork; personal and career development; keyboarding and computer literacy; leadership; and basic concepts of technology systems. Key actions that respondents felt were essential for encouraging education to bring about needed change included the following: (1) use statewide performance standards to measure student learning; (2) report student performance achievements on report cards; (3) provide remedial education until students demonstrate mastery; (4) establish entrance requirements for vocational education; (5) test and report student performance on nine basic skills; (6) certify students who achieve industry standards; (7) establish accountability measures; (8) reevaluate credentialing of educators; (9) hold educators accountable for student performance; and (10) integrate work-based experiences. The following suggestions for business-education partnerships were made: establish business advisory groups, provide volunteer personnel, support work-based learning options, support teacher internships or summer jobs, and expand apprenticeship programs. (Names of survey respondents and roundtable participants and survey results are appended.) (YLB)

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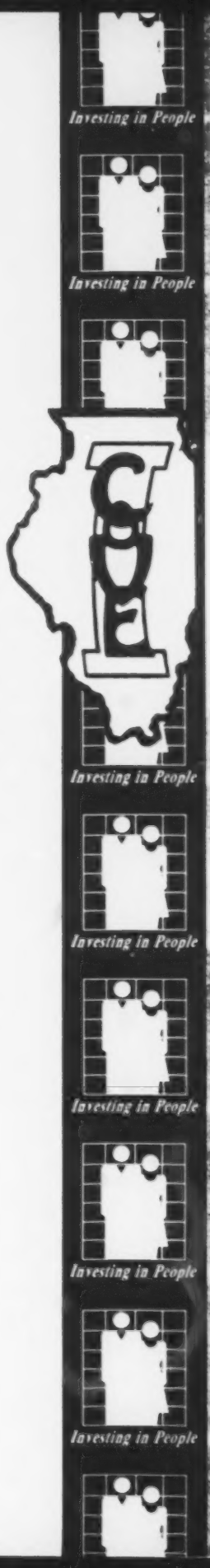

Toward a World-Class Workforce

1991

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(ICoVE)

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TO: The Citizens of Illinois

The National Commission on Excellence in Education in its 1983 report, "A Nation At Risk: The Imperative for Education Reform" stated "More and more young people emerge from high school ready for neither college nor for work. This predicament becomes more acute as the knowledge base continues in rapid expansion, the number of traditional jobs shrink and new jobs demand greater sophistication and preparation."

The Illinois Council on Vocational Education in its study, "Building Public-Private Partnerships to Improve Vocational Education in Illinois," found employer and labor groups saying that the National Commission's conclusions are still true today. In 1985, our state instituted educational reform initiatives which undoubtedly will have some impact on educational improvement. However, employers have not yet seen the results they feel are necessary for Illinois to produce a world-class workforce.

In public hearings held by ICoVE, an employer stated, "My competition is not in Illinois, it is in California, Japan, and Germany." Others made similar comments and emphasized that education is no longer tangential to employment, it is essential to employment.

This report makes recommendations and suggests actions which must be addressed by Illinois educators in counsel with business, labor, government, and parents. It is not directed toward just vocational education, but education in total. Time is running out on private industry's ability in Illinois to profitably compete in the national and international marketplace. Without an educated workforce, employers will look elsewhere. Gone will be taxable profits and wages so necessary to help education, as well as other vital public services.

Governor Edgar recently stated, "Education is tied very closely to the economic development of our state. The future of Illinois is going to be determined in the classroom."

We trust that ICoVE's recommendations shall be acted upon for the educational benefit of the students and enhancement of economic well-being among the citizenry. The time is now to build partnerships among education, business, labor, government, and the parents to improve the education enterprise and the quality of its product, namely young people fully prepared upon graduation from high school to enter the workforce or postsecondary education.

Robert M. Beckwith

Robert M. Beckwith, Chair
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Investing in People

An Equal Opportunity/Affirmative Action Employer

TOWARD A WORLD-CLASS WORKFORCE

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EXECUTIVE SUMMARY

Criticism of education has been mounting during the past decade. Business and labor are questioning the public education system's ability to prepare students to perform in a global economy, to help U.S. industries regain a competitive edge, and to adapt quickly to new and emerging technologies.

The private sector has become vocal in recommending improvements needed in education. Some recommendations have been heard; some have not; and others have been misunderstood. It is becoming apparent that the public sector and the private sector must work together as they approach the task at hand.

About the Study

In January 1990, the Illinois Council on Vocational Education (ICoVE) contracted with the Center for Governmental Studies at Northern Illinois University to conduct a study of business and labor to define the performance skills expected of those entering the workplace in the 90s and on into the 21st century. More specifically, the study was to identify goals that the private sector and educators need to pursue in order for vocational education in Illinois to prepare the product (participants) needed by the workplace (employees). Further, the study was to determine strategies using public and private sector partnerships for achieving the identified goals.

A survey of business people and labor representatives followed by eight roundtable discussions added both clarity and depth to findings of the survey. Responding to the survey were 1,120 from business and 26 from labor organizations (representing 1.2 million workers in Illinois). Ninety of these respondents participated in the follow-up roundtable discussions. The roundtables verified results of the survey. They also provided the interpretation or meaning given by employers and labor to educational words and phrases, e.g. basic skills, employability skills. The findings of that survey are available in the research report "Building Vocational Education in Illinois" prepared for ICoVE by Northern Illinois University.

This report incorporates facets of that research. It also brings together a composite of studies, plus ICoVE's professional expertise and understanding about what these mean for the educational system in Illinois. These are the basis for ICoVE's recommendations about what student performance ought to be. Suggestions for strategies to accomplish needed performance and strategies for public-private partnerships are also presented.

Defining the Basic Skills

At the roundtable discussions, participants used the term "education," not "vocational education" when discussing primary needs or "basic skills" needed by the workforce. Likewise, when business and labor discuss what is needed from the educational system, they do not differentiate levels such as secondary or postsecondary. Problems with inadequate basic skills do not stop at the secondary level. These problems, in varying degrees, are present in community college students, university students, and the existing workforce.

The basic skills as described by the survey went far beyond the traditional 3 R's. Nine components of the basic skills were presented in the survey and assessed by respondents. From the discussions, the Illinois Council determined these nine are what the private sector means when it discusses the "basic skills."

As ordered by the survey participants, the new nine basic skills include:

- Reading, writing, and math skills
- Communication skills, including listening and oral communication
- Employability skills including work attitudes and responsibilities, and knowing how a business operates
- Critical thinking, problem solving, decision making
- Group and teamwork skills including interpersonal and social relations
- Self-esteem, goal-setting, and personal and career development
- Keyboarding and computer literacy skills
- Leadership skills and improving organizational effectiveness
- Basic concepts of technology systems

It is interesting to note that the first six "basics" were "supported" or "strongly supported" by over 90% of the business and labor people. The last three received that level of support from 70-86%. The term basic academic skills was given to the first two basics.

Business and Labor Suggest Actions

At roundtable discussions, participants expounded upon why basic skills are so important for today's workforce. They also provided insight into how these basic skills must be applied. The following summarizes key actions that roundtable participants felt essential for encouraging education, particularly vocational education, to bring about needed change.

- Use statewide performance standards to measure student learning.
- Report student performance achievements on their report cards.
- Provide remedial education in basic academics at the elementary level until students demonstrate mastery.
- Establish entrance requirements for vocational education.
- Test and report student performance on the nine basic skills.
- Require strong academic achievement of vocational students for graduation.
- Certify students who achieve industry standards.
- Eliminate barriers to private and public-sector involvement.
- Require current work experience of educators.
- Establish accountability measures.
- Base evaluation on student performance standards.
- Review state governance of vocational education.
- Re-evaluate credentialing of educators.
- Hold educators accountable for student performance.
- Tie funding to accountability.
- Design programs which retain student options.
- Integrate work-based experiences.
- Work with employers and labor to expand student work experience.
- Establish vocational and academic education as equals in preparing students for high school graduation.
- Expand efforts to upgrade the existing workforce.
- Improve the image of vocational education
- Establish a comprehensive guidance program which serves all students

Setting the Mission

Strong basic skills must be a primary mission of the educational system. This mission encompasses the total educational process, not just vocational education. It is a mission which must be achieved whether vocational education exists or not. In addition, standards for stronger basic skills must be upgraded and participants must be able to apply these skills to real workplace situations. Employers and labor people are willing to work with educators to improve the performance of participants. Education must welcome their help. Without such cooperation, the workforce will be ill-prepared to meet the challenges. U.S. business will trail in the marketplaces of the world.

Throughout most of the twentieth century, preparation for work has been uniquely the responsibility of vocational education. However, as new technology replaced manual dexterity, brawn, and muscle, vocational education's role has expanded and has become heavily dependent upon many academic underpinnings. Likewise, the traditionally "academic" arena has become more and more intertwined with vocational education. It must go beyond rote memory into the realm of application. While needed performance has changed, the heavily institutionalized process of education has remained steadfast.

Rapid changes in the workplace are requiring "cradle to grave" education. Lifelong learning must have a base on which to build. Too many young people are leaving schools without the adaptability

and flexibility of skills commensurate with a good educational foundation. They are joining a workforce already characterized by high rates of illiteracy, poor academic preparation, and few skills conducive to adaptation. (Thus, the problem is not new.) This combination of both new and existing workers is costing business, nationally, $210 billion each year for in-house training. By the year 2000, 75% of all workers will need retraining and upgrading of occupational skills.

As described by the employers and labor, today's workplace requires a lifetime learning process incorporating both acquiring and refining of new skills necessary for competitive productivity and economic stability. As a primary role, education has responsibility for preparing students to successfully enter the workforce in some meaningful, productive way and to successfully enter and complete some post-secondary education level courses. High school graduates must acquire and demonstrate enough adaptability skills to survive entry into both work and postsecondary education.

Recommended Performance

If education is to provide the knowledge and skills necessary for a world-class workforce, changes are inevitable. The Illinois Council on Vocational Education submits recommendations it believes that, if implemented, will initiate needed change.

The state education agencies (ISBE, ICCB, IBHE) must:

- Adopt policy to assure that students demonstrate competency of basic academic skills before entering secondary education.
- Establish world-class performance standards for preparing students to enter the job market and/or postsecondary education.
- Require student performance to demonstrate their ability to apply basic skills to real work situations and continued education at new heights of excellence.
- Develop standards to require professional educators to demonstrate competency in their teaching specialty, job skills, and workplace practices.
- Support ICoVE's recommendations to the Illinois Teacher Certification Board for stronger, more rigorous certification requirements.
- Require all educational institutions to make the career guidance function available to all students.

Education has the primary role for preparing people for employment. Although vocational education has a role in this preparation, it does not have an exclusive role. Business and labor representatives need a quality product from our schools. It is clear that education's responsibility for preparing a quality product is not targeted to one particular segment of the educational enterprise. An inherent relationship exists within all segments of the process, with preparation for work a responsibility involving cooperation among all disciplines.

Creating Partnerships

Business and labor are willing to assist education in preparing a world-class workforce. They want a concise, clear message about what they are being asked to do. They expect a report of their efforts. Through partnerships with education, business and industry can:

- establish business advisory groups to advise on industry skill standards,
- support classroom instruction and career counseling by providing volunteer personnel and other resources,
- support work-based learning options to ease transition from school to work,
- support upgrading teachers through internships or summer jobs, and
- expand access to quality vocational education through apprenticeship programs.

Together, the public and private sectors of Illinois can prepare a workforce that is second to none and reaches new heights in the world marketplace.

BASIC SKILLS

For some time now, there has been agreement that education needs to "get back to the basics," but what are the basics?

From business and labor ICoVE learned that the terms used when they discuss basic skills are broader than the definitions generally used by educators. Business and labor described nine groups of essential basic skills for today's worker. Along with the reading, writing and math skills, today's employers stress listening and communication skills. They refer to this group of basics as the basic academic skills and rank these skills as the top two priorities for education.

Closely following these two priorities were employability and work readiness skills, i.e. good attitude toward work, the work ethic, knowing how business operates-- all new basic skills sought by employers. The ability to solve problems, make decisions, reason, and think must equally become a goal of education if it is to produce a quality product for the job market.

Business and labor emphatically explained that basic skills means basic for the total workforce, not just new high tech employment. Skills needed by the workforce have changed because "we do work differently today," they said. "By the year 2000, work will again have changed dramatically. A worker without a solid foundation in basic skills won't be able to keep up."

The impact of technology not only affects what work is done, but also how work is done. Skills once thought to be social skills, e.g. interpersonal, leadership, teamwork, and personal skills, are now given a priority position in the ranking of basic skills that employers and labor say are essential. Thus the concept of basic skills is enlarging to encompass problem solving, the ability to adapt existing knowledge to new situations, and being effective in group interaction.

BUSINESS AND LABOR'S NINE BASIC SKILLS
(Percent strongly supporting & supporting)

■ TIER ONE

Business	Labor	
99.8%	96.1%	Reading, writing, and math skills
98.6%	96.2%	Communication skills, including listening and oral communications
97.3%	88.5%	Employability skills including work attitudes and responsibilities and knowing how a business operates

■ TIER TWO

Business	Labor	
96.7%	99.0%	Critical thinking, problem solving, decision making
95.2%	92.4%	Group and teamwork skills including interpersonal and social relations
93.0%	84.6%	Self-esteem, goal-setting, and personal and career development

■ TIER THREE

Business	Labor	
86.3%	80.7%	Keyboarding and computer literacy skills
84.3%	72.0%	Leadership skills and improving organizational effectiveness
70.6%	80.7%	Basic concepts of technology systems (e.g., biotechnology, communication systems, physical technology)

Likewise, concepts and skills related to computers and technology are no longer unique to specific occupations, but have become inherent for nearly all facets of the workforce. These, too, have become important "new" basics.

In reviewing the rank order of priority to the nine basic skills (Table 1) by the rating of business and labor, it is important to note that all nine were "supported" or "strongly supported" by over 70% of those responding to the survey. Six of the nine had support from over 93% of the respondents with two others having over 84% support. This level of support suggests "mandatory" more than "priority." The nine basic skills were grouped into three tiers.

A closer review of the priority ranking offers an appropriate sequence for learning, i.e. from simple to complex, from lower order to higher order thinking skills. Thus a more accurate interpretation of these nine basic skills might be that all are essential elements of student performance. They should be presented and acquired in the order ranked.

■ TIER ONE

READING, WRITING, AND MATH SKILLS.

It was repeatedly stated that the workforce must be able to read, write, and compute mathematical problems at a competence level never before expected for entry into the workplace. Support was given to retaining students in predominately basic academic programs until they have mastered the basic competencies. Standards for competency achievement of special needs students must be appropriate for their abilities.

The ability of students to apply basic academics was stressed repeatedly. Although vocational education is uniquely situated to help students apply basic academic skills to real workplace situations, this mode of learning must be an objective for all disciplines.

COMMUNICATION SKILLS INCLUDING LISTENING AND ORAL COMMUNICATION

Today's modern workplace requires considerably more communication skills than before. Changing processes used by business mandate employee interaction. The use of work teams and quality circle problem solving require increased competencies for oral and listening skills.

Students must demonstrate that they can read or listen to directions and carry out these instructions. They must be able to describe processes, organize material, and explain to co-workers what needs to be done.

Simulation of the workplace setting in academic, as well as occupational programs can greatly enhance listening and oral communications through the application of acquired skills.

EMPLOYABILITY SKILLS INCLUDING WORK ATTITUDES AND RESPONSIBILITIES AND KNOWING HOW A BUSINESS OPERATES

A positive attitude about work and the willingness to accept the responsibilities of a job are part of the basic skills employers want. They want workers who will be on time and be at work everyday. Employers are seeking workers who take pride in their work, want to advance on the job, and are willing to invest in their own future.

Workers in the 90s need to know how a business operates and where they fit into the overall process.

Business believes their best employees are those who understand what the business is about; they understand that the business operates for a profit; and they understand the relationship of productivity to a competitive edge.

■ TIER TWO

CRITICAL THINKING, PROBLEM SOLVING, AND DECISION MAKING

Today's technology, coupled with new processes being used in the workplace, requires workers to be able to think critically. Workers must be able to identify and isolate a problem and then solve the problem. Decision-making skills are essential in the workplace.

Evolutionary changes are accelerating at rapid rates. Workers must know how to learn in order to keep pace with change. They must be able to adapt knowledge and skills to new technology. They need to have the capacity for being flexible,

not only in the tasks they perform, but also in how they perform the tasks.

GROUP AND TEAMWORK SKILLS INCLUDING INTERPERSONAL AND SOCIAL RELATIONS

More and more the workplace depends on teamwork and group efforts to complete a task. Students must be able to function as a team member. This includes being knowledgeable of the task at hand and comprehension of the team concept, but more importantly, it means good people skills. Workers must be able to work with other people.

Poor interpersonal skills continue to be a primary cause of dismissal from the workplace. Students need to know how to negotiate and resolve problems. They also need to understand basic human behavior and the need to respect others.

SELF-ESTEEM, GOAL-SETTING, PERSONAL AND CAREER DEVELOPMENT

A positive self-image is important to employers. They prefer employees with goals and personal aspirations, but are concerned that many do not understand career paths and the necessity for constantly upgrading skills.

Participants expressed concern that students know that vocational education has, in many instances, been watered down and used as a dumping ground for poor-achieving students. This, they say, does not contribute to "pride in work" or a good self-image of participants. They have been allowed to get by and take the easy way out.

Concern that secondary counseling implies that the four-year college or university route is a preferred route was expressed. This, employers said, may cause some students not to pursue vocational-technical education leading to employment, community colleges, or technical institutes.

Improved career counseling and parental counseling must offer options to students and better preparation for continuing their education and entering the labor market.

TIER THREE

KEYBOARDING AND COMPUTER LITERACY SKILLS

Few young people today lack experience with computers. Many are growing up on video games. Surprisingly, employers were not particularly concerned about the computer skills of new workers. However, repeatedly they said this was because they were more concerned with the basic academic skills. They did support keyboarding and computer literacy as one of the nine basic skills.

LEADERSHIP SKILLS AND IMPROVING ORGANIZATIONAL EFFECTIVENESS

As new processes have been introduced to the workplace, new approaches to the procedures used in business and industry call for leadership and initiative at all levels. Few jobs remain which are the same day after day.

Teamwork and group work often put managers and laborers on the same problem-solving team. The ability to improve processes enhances the effectiveness of the organization.

BASIC CONCEPTS OF TECHNOLOGICAL SYSTEMS (e.g., Biotechnology, Communication Systems, Physical Technology)

Comprehension of basic concepts in technological systems is important in today's workplace. Good basic skills in the sciences provide a foundation on which to build technological competencies.

Representatives of labor organizations rated the need for concepts basic to technological systems higher than did their business counterparts.

NEEDED PERFORMANCE

Clearly, employers and labor need the priority for education to be the application of basic academic skills. With this, they want assurance that participants have demonstrated performance proficiency of the nine basic skills before they enter the workforce or postsecondary education.

To inaugurate changes necessary for creating a world-class workforce, the Illinois Council on Vocational Education makes the following recommendations:

State Education Agencies (ISBE, ICCB, IBHE) must:

Adopt policy to assure that students demonstrate competency of basic academic skills before entering secondary education.

Establish world-class performance standards for preparing students to enter the job market and/or postsecondary education.

Require student performance to demonstrate their ability to apply basic skills to real work situations and continued education at new heights of excellence.

Develop standards to require professional educators to demonstrate competency in their teaching specialty, job skills, and workplace practices.

Support ICoVE's recommendations to the Illinois Teacher Certification Board for stronger, more rigorous certification requirements.

Require all educational institutions to make the career guidance function available to all students.

The workplace of the nineties and the 21st century will require a more sophisticated workforce. Adapting to constant change and improved technology will demand higher levels of academic and occupational skills. The ability to apply knowledge on the job will be critical.

Business and labor want public education to be accountable for student performance. This is a radical change from past evaluation within the educational community. Until education has consequences imposed because standards of student performance are not met, it probably will not change.

In some instances, employers and labor have lost both confidence and trust in the educational process. Some indicated that they need to return to the educational setting to find out what's happening and the day-to-day problems with which education must deal.

If education is to prepare students with world-class basic skills and world-class occupational skills, the profession itself must also be world class. Instructional staff and administrators must be knowledgeable of the workplace, in tune with technology, and aware of the changing job market.

The Illinois Council on Vocational Education recommends changes in the performance of educators in the following:

The Illinois Teacher Certification Board must:

Require a one-year internship for prospective teachers to be credited as the first of a three-year probationary period.

As a condition of initial certification, require prospective teachers and administrators to pass a rigorous competency test developed by the State's Teacher Certification Board.

Validate certificates of all certified personnel for a period of five years, subject to renewal, with evidence of keeping current in the field of teaching specialty and for vocational-technical education, including work experience.

Repeal provisions which allow for a lifetime certificate or automatic renewal.

Provide alternative certification which permits skilled technicians and professionals to teach in their area of expertise.

Business and labor representatives have suggested several ways student performance of basic skills might be accomplished and demonstrated. They believe, however, that educators should be given the final responsibility for determining how students can best achieve the recommended performance.

In order for education to deliver a product needed and sought after in the workplace, it must demonstrate an elevation of student performance. This level of performance must be the goal of every educator, pre-K through adulthood, academic and vocational alike.

WHAT BUSINESS AND LABOR SUGGEST

In order for the educational process to prepare students with the performance skills needed to meet the new hiring standards of employers, business and labor made several suggestions which are delineated below. Some will seem straightforward; some will seem unwieldy and highly impractical, but the concern should focus on the intent of the message being delivered. It is then for the educational community to determine how best to accomplish business needs.

SUGGESTED ACTION	RATIONALE
■ Establish statewide performance standards which measure student learning outcomes in the basic academic skills.	Performance standards must be established for basic academic skills. Schools must be held accountable for student performance on learner outcome measures. Students demonstrating less-than-adequate basic academics should have a concentration or remediation until performance is at the necessary level. Without these academic basics, students will be unable to acquire other basics needed in occupational programs or continuing on to postsecondary education.
■ Report student performance achievements on the student's report card.	Student performance and competencies should become part of the student report card. Employers and labor indicated they have lost faith in the meaning of a high school diploma. An actual score, performance rating, or accomplished competencies would improve the school's communication to the employer.
■ Provide remedial basic academics for students at the elementary level until students demonstrate mastery.	Business and labor were adamant about assuring that students do not progress beyond the elementary level until they have mastered the basic academic skills. Without these skills, there is no basis on which to develop more complex skills.
■ Establish entrance requirements into vocational/occupational education.	Vocational education must establish entrance requirements for programs as employers set entrance requirements for employment. Entrance requirements should reflect the performance level of basic academics and other academia needed to succeed in the program. Vocational education can enhance and reinforce basic skills. It must play an important role in helping students to apply

SUGGESTED ACTIONS	RATIONALE
	basic skills and other academic subject matter. Basic acquisition of academics and basic skills is not vocational education's responsibility alone. It is all of education's responsibility.
■ Require vocational students to take remedial education if their academic competencies are marginal.	Many students entering secondary and postsecondary education may have met minimal standards established for the basic skills. These students should be co-enrolled in remedial education if they desire to participate in vocational education. Vocational education must also reinforce academic learning. Vocational education can ill-afford to level down content to accommodate students who have not acquired the basic skills.
■ Test and report student performance for the nine basic skills needed by business and labor in a manner similar to ACT and SAT scoring.	Develop an "employability readiness" test, similar to the college entrance tests like the ACT and SAT. If based on statewide standards for the basic skills, it would be useful to potential employers. Such a performance test would command attention to the importance of these basic skills for successful employment.
■ Require strong academic performance (e.g. math, science) of vocational education participants for high school graduation.	Over forty-six percent of those responding to the survey strongly supported (an additional 42% supported) that vocational education should require students to have strong academic skills before they are permitted to graduate from high school vocational programs. (See Appendix B.) This is basic if students are to understand how a machine operates, not just how to operate a machine.
■ Certify that students have met industry standards.	Vocational education programs need to work with industry to determine at what levels employees need to be able to perform in basic, academic, and vocational skills, i.e. industry skill standards. Student performance should be measured and certified to assure employers that the participant has adequate skills. (See Appendix B.)
■ Eliminate barriers to private sector involvement.	If business and labor are going to work with schools to help improve student performance, barriers to their participation must be removed. Increased involvement of workers with specific expertise can add a great deal to classroom instruction. Current requirements for teacher certification must be revised to allow and encourage this kind of participation.

SUGGESTED ACTIONS	RATIONALE
■ Give educators responsibility for determining how to achieve student performance.	As professionals, educators should be responsible for student performance. They have expertise in teaching methodology as well as measurement. The private sector has been vocal about what it needs from the educational arena. How to achieve the desired outcomes is the professionals' responsibility. However, employers and labor should be used to assist where feasible.
■ Include vocational education's measure of student performance in the State's Report Card.	Student performance of industry-established standards and skill competencies should be included on report cards of both local schools and the State of Illinois. Business and labor representatives believe preparation for employment is a major role of education. They want assessment of student performance achievement for employment decisions.
■ Require educators to have current work experience related to their teaching field.	Educators must be apprised of the processes, the technologies, and conditions of the workplace for which they are preparing students. Many teachers have not been "out of the classroom" for over a decade. Some academic teachers and counselors have never been employed in the private sector. To update knowledge of the workplace, current experiences should be tied to certification and recertification of educators.
■ Establish accountability measures such as job placement and job performance follow-up.	Schools must conduct follow-up studies to determine student success in employment and in postsecondary education. Findings should be reported and used to revise programs. Business and labor support accountability of their tax dollar.
■ Evaluate schools, programs, and teachers on student performance standards.	If students do not meet performance standards for academic skills, basic skills, occupational competencies, job performance, or continued education performance, schools should be held accountable. This performance should be part of the school's report card. Responsibility for improving programs and teacher performance should belong to the school. Consequences for not meeting standards should be clearly identified.
■ Hold educators accountable and identify consequences if students do not meet performance standards.	If students do not perform at the established standard level, educators must be held accountable. Consequences for not meeting standards should be clearly identified.

SUGGESTED ACTIONS	RATIONALE
■ Tie funding to accountability, i.e., consider suggesting that the public be given the power to withdraw or redistribute funds if programs fail to produce.	If programs are failing to function as expected, funds should be reallocated to programs which are producing.
■ Review the adequacy of state-level governance of vocational and technical education.	At one time the majority of vocational and technical education programs were offered through secondary schools and area centers. This has changed considerably since the establishment of community colleges and the expanded role of colleges and universities. There is also a need to bring other public training programs into a total plan and delivery system for preparing the Illinois work force.
■ Reevaluate the appropriateness of current certification, recertification, and tenure of instructional standards.	Outdated laws adversely affecting quality education must be modified. As the world changes, so does work. Education must adapt. Teachers must keep current if they are to prepare students for the changes around them. As work changes, programs and methods offered by schools must also change. If tenure laws need to be repealed in order to hire appropriate staff, then this must be done.
■ Change the preparation and certification requirements for counselors to enable them to help all students move with confidence from school to work and further education.	Counselor training has provided counselors with an excellent background for advising students toward additional education. This plus their academic preparation has caused counselors to be most comfortable in advising baccalaureate-bound students. They most generally have limited preparation and information on careers available through vocational and technical programs in high schools and community colleges.
■ Design vocational education programs which provide options for continuing at the postsecondary or university level. Give strong support for tech prep programs which will enable students to be prepared for employment or further education.	Keeping options open is important. Vocational education students at the secondary level should be urged to participate in courses which will allow them to enter community colleges or universities at a later time if they so desire. The tech prep programs will make this option available.
■ Integrate work-based experiences as part of vocational/occupational programs wherever possible. (See Appendix B.)	Some employers told ICoVE they believed six months on the job may be as valuable for students as a semester in a university classroom. Exaggerated perhaps, but the point is well-taken. Employers do find merit in work-based programs. They also warned that work-based learning must be carefully designed to assure that its potential is achieved.

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SUGGESTED ACTIONS	RATIONALE
■ Work with organized labor to expand students' work experience in the workplace.	Organized labor is interested in working with education to provide work-based learning for students. Labor should be involved in planning these programs to assure the experiences are developmental.
■ Establish vocational and academic education as equals in preparing students for high school graduation.	Quality preparation for employment is essential to the nation's economy. Schools must stop making students who wish to go to work directly out of high school feel as if they are being placed in second-rate programs. Putting "problem" students and students who don't want vocational education in the programs must also stop. This causes programs to be diluted or leveled down. The workforce cannot tolerate workers from second-rate programs. Too often education tracks students into programs for those who "think" and those who "work" when in fact life for everyone is a blend of both.
■ Work with business and labor to expand efforts to upgrade and maintain the existing workforce.	Education must identify its role in upgrading, retraining and maintaining the existing workforce. Poor academic skills and illiteracy in the workplace must be eliminated so that retraining for today's technology can occur. The problem is urgent if business and labor are to move the U.S. workforce toward world-class standards.

WORKFORCE MAINTENANCE

Although the Illinois Council's study focused on preparing the workforce in lieu of maintaining the force, we would be remiss to not address issues pertinent to workforce maintenance.

Illinois has 2,000,000 incumbent workers who need one or more levels (i.e. elementary, high school, postsecondary) of education by the turn of the century if they are to remain in the workforce as productive workers. To achieve this will be a massive undertaking. In Illinois, the private sector is already spending an estimated $1.5 billion on formal in-house training, plus another $9 billion on informal in-house training.

It is estimated that Illinois corporations will spend over $450 million annually to purchase education and training for their existing workforce. The educational system must be prepared to deliver these services.

Repeatedly, representatives at the roundtables said that poor academics; the inability to apply basics; problems stemming from poor attitudes and interpersonal skills; and the inability to make decisions, think critically, provide leadership, and learn new technologies, to name a few, are as real among the existing workforce as the new entrants. Seventy-five percent of our 1990 workforce will still be working in the year 2000. According to a recent study done by the American Society of Training and Development (ASTD), this 75 percent will need retraining by the year 2000. This means approximately 4,875,000 members of Illinois' workforce. Employers recognize the problem and also accept the blame for not attacking it sooner.

While the nation spends $238 billion annually on elementary, secondary, and higher education combined, employer-based training spends $210 billion annually, $30 billion for formal and $180 billion for informal. ASTD reports continue by saying workforce training provides most skills acquired after the age of 25. Further, ASTD states, all skills for two out of three jobs are workplace-learned.

Several systems are in place which could confront the problem head on. However, there is no Illinois plan or coordinated approach for retraining, reeducating, and/or upgrading worker knowledge and skills in order to maintain a world-class workforce. The problem is greater than one of "training." Clearly, it must include education, both academic and applied.

It must also include new procedures and new ways of doing work, not only production methods, but also decision-making processes. Workers must learn to "take what they know, transfer it to a new task, and apply the appropriate technology to get the job done."

The educational community, the job training community, and the private sector itself must take a hard look at the challenges before it. The challenge must be defined and a plan must be designed if the existing workforce is to fulfill the responsibilities of being highly productive in a competitive world market.

BUILDING PARTNERSHIPS

If business and labor are to form partnerships with education, these must be full partnerships, with the private sector having a meaningful role. Too often education gives lip service to working with business and industry. The private sector representatives told ICoVE that they "do not want to be window dressing." If the private sector is called upon to assist, it expects to assist and see results for its efforts. This does not always happen.

Frustration about offering help to school systems, but receiving no follow through from schools was expressed. Participants often said, "tell us what needs to be done and how we can help and we'll be there."

Likewise, educators sometimes express frustration with the private sector because, "they want it now and schools don't change overnight."

The private sector is willing to work with public education to establish skill standards students must be able to perform. Many industries have national standards toward which occupational education programs need to prepare students.

Volunteer personnel from business and labor may need to be brought into the classroom to assist with classroom instruction and career counseling. Employers and labor are willing to do this, but activities must be well-planned as part of the program curriculum. Involvement of workers in teaching specific high-level skills is one way of providing current, up-to-date skills.

Opening the doors of business for students to acquire on-the-job experience and to help educators acquire current experience in the workplace may be accomplished through public-private partnerships. The transition from school to work, as well as hands-on experiences, will be valuable to students. Time at the job site may also reinforce the need for students to master the basics.

SUGGESTIONS FOR PARTNERSHIPS

Establish business advisory groups to advise on industry skill standards.

In addition to helping schools identify performance standards required by the industry, business and labor can help develop performance measures and competency testing. Advisory groups may be helpful in arranging for on-site visitations to the workplace and the identification of appropriate equipment and instructional materials. Employer validation of performance measures may help vocational education regain the confidence of the private sector. (See Appendix C.)

Support classroom instruction and career counseling by providing volunteer personnel and other resources.

Enrichment of classroom instruction by experts from industry may provide much-needed revitalization for vocational education programs. Although industry experts are used to some extent at the postsecondary level, certification is an issue at the secondary level. The issue must be resolved.

Career information, as well as career counseling needs firsthand information from the worker. The worker can help students to realize more thoroughly what an occupational field entails.

Career information is valuable in helping students comprehend the relationship of academic subject matter to future employment. It answers the age-old question, "what do I need to learn this for?" (See Appendix C.)

Support work-based learning options to ease transition from school to work.

Partnerships may help access on-the-job training (OJT) experiences for students. Some employers expressed at roundtables that they thought OJT had merit for improving vocational education. (See Appendix C.)

Employers and labor indicated they believe that OJT, i.e. cooperative education, is a valuable experience. They stressed that the experience needs to be structured and well-supervised.

Support updating of teachers through internships or summer jobs.

The private sector stated its willingness to open its doors to classroom teachers, counselors, and administrators. It is willing to work with teachers to incorporate what they learn on the job into the curriculum.

A variety of activities can help to bring the workplace and the classroom closer together. Class visitations to business sites, hands-on experience with special equipment in the workplace, and demonstrations from workers are but a few of the activities that business, and industry indicated they would be willing to help educators develop. (See Appendix C.)

Expand access to quality vocational education through apprenticeship programs.

An opportunity for students to participate in pre-apprenticeship programs provides both business and labor the opportunity to observe students prior to admission into the full apprenticeship program. Labor continues to support the apprenticeship program and its link with the educational system as a highly regarded process for preparing the workforce. Labor is willing to work with education to identify potential apprentice participants for work-based learning experiences.

APPENDICES

APPENDIX A
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APPENDIX B

What Vocational and Technical Education Should Do

Vocational-technical education should	Strongly Support	Support	Do Not Support	No Opinion
Prepare students for occupations and industries with current and projected job openings.	62.1% [1] 46.2% [2]	36.6% 46.2%	.7% 3.8%	.5% 3.8%
Ensure that all vocational programs are based on current industry skill standards.	54.7% 26.9%	42.0% 65.4%	2.0% 7.7%	1.3% 0%
Certify that students have achieved industry skill standards.	50.7% 30.8%	43.1% 65.4%	3.2% 3.8%	2.9% 0%
Establish performance standards which hold schools accountable for skills attainment.	50.3% 26.9%	36.7% 53.8%	7.8% 7.7%	5.2% 11.5%
Require that students have strong academic skills (e.g. math and science) in order to graduate from high school vocational programs.	46.6% 61.5%	42.0% 34.6%	9.3% 3.8%	2.2% 3.8%
Require that high school students take academic courses necessary to qualify for community college and university programs.	23.8% 23.1%	41.7% 46.2%	28.3% 30.8%	6.3% 0%
Build a workplace experience option into high school programs so that students can learn through practical applications and on-the-job experience.	42.3% 38.5%	50.0% 38.5%	5.5% 19.2%	2.3% 3.8%
Require vocational teachers to be trained and certified according to current standards in the industry related to their teaching specialty.	62.0% 46.2%	33.6% 38.5%	1.9% 11.5%	2.5% 3.8%
Require that all vocational teachers have current industry work related to their technical field.	43.6% 42.3%	39.6% 26.9%	10.7% 19.2%	6.2% 7.7%

[1] Business Response
[2] Labor Response

Source: ICoVE survey conducted by NIU.

APPENDIX C

Strategies for Building Public-Private Partnerships

Strategy	Strongly Support	Support	Do Not Support	No Opinion
Establish business advisory groups, i.e. ask knowledgeable business people to advise on whether vocational programs are meeting industry skill standards.	58.2% [1] 34.6% [2]	39.2% 50.0%	.6% 11.5%	1.9% 3.8%
Support classroom instruction and career counseling, i.e. ask businesses to provide volunteer personnel and other resources to enrich classroom instruction and career exploration and counseling.	38.6% 46.0%	51.5% 38.5%	5.2% 11.5%	4.7% 3.8%
Support work-based learning options, i.e. ask businesses to offer students part-time on-the-job training which supports classroom instruction and provides better access to jobs after graduation.	39.9% 38.5%	53.5% 30.8%	4.1% 26.9%	3.6% 3.8%
Support teacher training, i.e. ask businesses to provide internships or summer jobs to teachers to ensure that they are up-to-date with modern technology, skill requirements, and business operations.	38.5% 42.3%	49.5% 34.6%	5.5% 15.4%	6.5% 7.7%

[1] Business Response
[2] Labor Response

Source: ICoVE survey conducted by NIU.

APPENDIX D

WHAT BUSINESS AND LABOR REPRESENTATIVES SAID ABOUT THE BASIC SKILLS

READING, WRITING, AND MATH

Examples of what business and labor said:

Workers need to be taught how to read directions and follow them - college kids need this, too.

Just teaching the academics in the same theoretical way will not do the job - unless students are going to be able to use [apply] what they learn, forget it.

They need at least simple math - add, subtract, multiply, and divide whole numbers and fractions.

People using simple cutting tools need geometry, decimals, and fractions.

Young people are highly trained and have lots of knowledge, but they don't understand how to use it.

Some have capability, but no knowledge base. These shouldn't get out of the system.

Academic skills must be achieved in early elementary grades. There should be checkpoints for this. Students should be retained until they meet the required standard.

How can they deal with computers? They need to be able to read and write first.

Retraining in basics is costly for us.

When I have to pay real estate taxes for schools, I get darned mad.

COMMUNICATION SKILLS INCLUDING LISTENING AND ORAL COMMUNICATION

Examples of what business and labor said:

We've found people can't organize and prepare a presentation -- today everyone needs to be able to do that.

Participation in quality circles requires listening and tallying skills.

You can't move up to a first-line supervisor if you can't communicate with the workers.

They need to be able to give verbal instructions to co-workers.

EMPLOYABILITY SKILLS INCLUDING WORK ATTITUDES AND RESPONSIBILITIES AND KNOWING HOW A BUSINESS OPERATES

Examples of what business and labor said:

They need to understand concurrent engineering - from design to shipment.

They need to understand negotiations and the economy.

They need to understand profit and loss.

Students need to have to pass "job application" for a grade of A, B, C, D, or F to get out of school.

Kids need to know that if instead of making 15 parts, if we make 20, it drives down the cost of the part.

There's a work ethic crisis -- it's erosion -- figuring out how to avoid work.

Schools need to educate students on principles of behavior -- their past behavior is important when job seeking.

Kids need to understand sticking with a job, not flitting from job to job.

I don't want to buy a built-in absentee problem.

There's a mentality that says "I can live on 20% less, therefore I'll take one day a week off."

Many young people aren't in tune with the concept of "paying your dues." They get a job flipping hamburgers and then want it all now.

Most young people are not well-groomed for a job interview.

CRITICAL THINKING, PROBLEM SOLVING, AND DECISION MAKING

Examples of what business and labor said:

Most can solve problems once they figure out what the problem is.

They have to be able to identify the problem before they can solve it. Most can't do that.

As management flattens, problem-solving goes lower.

We have to provide training sessions on problem solving skills.

Many, particularly engineers, can solve textbook problems, but not real problems.

Too many have to ask, "what do I do next," at every step.

They need a means of attack. For repair people it is critical.

If shown how to operate a machine, if they don't use it daily, they can't remember how to operate it the next time they go to use it.

GROUP AND TEAMWORK SKILLS INCLUDING INTERPERSONAL AND SOCIAL RELATIONS

Examples of what business and labor said:

In quality circles, they have to become involved.

Teams of workers are used for repairs .

Group dynamics is very important. These are personal skills.

Some don't understand their share of responsibility and what it means to a group effort.

They need to know that sometimes you gotta work and get along with people you don't like.

SELF-ESTEEM, GOAL-SETTING, AND PERSONAL CAREER DEVELOPMENT

Examples of what business and labor said:

Self-esteem and motivation are important in testing.

It's not OK to be an electrician or a plumber.

Kids need better counseling from their parents.

We found 22% of our workers on drugs and alcohol.

Career counseling should provide tools for options.

They need better career days, they need to be brought into the plant, they need a chance to work in the job to see if they like it, and they need experts talking to them in their classes.

Young people often think if they get a job, they're set for life . . . they don't see the career path.

We have a mind set that everyone has to be a college grad.

KEYBOARDING AND COMPUTER LITERACY

Examples of what business and labor said:

Getting workers up to speed on computers is not difficult, but they have to be able to read to be able to learn.

Computer skills of graduates could improve, but take care of first things first -- the 3 R's.

Give them enough computer to not be afraid of it.

Computer instructions need to talk our language.

How can they deal with computers? They have to read and write first.

BASIC CONCEPTS OF TECHNOLCGICAL SYSTEMS (e.g., Biotechnology, Communication Systems, Physical Technology)

Examples of what business and labor said:

Each industry has different needs for computers and technology.

Teachers need to be global in teaching basic theory.

Having technical skills will increase pay.

LEADERSHIP SKILLS AND IMPROVING ORGANIZATIONAL EFFECTIVENESS

Examples of what business and labor said:

We need to be able to work people up -- internal mobility is important because it's incentive and motivation.

Leadership skills are needed.

Leadership shows up in team work.

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